

Amendments to the Specification:

Please replace paragraph [0029] with the following amended paragraph:

[0029] After exposure of the photoresist layer 40 in the manner just described, the photoresist layer 40 is developed, in a conventional manner. In areas of the mask blank 32 where there are no defects, the entire photoresist layer 40 will be removed by the development process. However, as illustrated in Fig. 8, in areas of the mask blank 32 where defects 38 are present, a portion [[46]] 51 of the photoresist layer, which, due to the presence of the defect 38, was not sufficiently exposed by the combined incoming and reflected radiation beams during exposure, will remain on the surface of the mask blank 32. The presence of any photoresist [[46]] 51 on the surface of the mask blank 32 after development indicates the presence of a defect 38 in the mask blank 32.

Please replace paragraph [0030] with the following amended paragraph:

[0030] A very small amount of photoresist [[46]] 51 may remain on the surface of the mask blank 32 after development if a defect 38 is present therein. The presence of any remaining photoresist [[46]] 51 may be determined using a scanning electron microscope (SEM), atomic force microscope (AFM), or a similar device. However, scanning the surface of the mask blank 32 using such a device to find any remaining photoresist [[46]] 51 may be prohibitively time consuming. In accordance with the present invention, the photoresist [[46]] 51 may be loaded with a fluorescent dye. Therefore, after development, illumination with the excitation wavelength of the dye will quickly and effectively reveal the location of any remaining photoresist [[46]] 51. An optical microscope will be sufficient to detect the presence of a fluorescent area on the mask blank 32, thereby indicating the presence of a defect. Resolution is not an issue, since fluorescence can be used to detect optically single molecules. This dark-field type of imaging using scattered light is extremely effective and sensitive, since only the presence of defects, resulting in remaining photoresist [[46]] 51 with a fluorescent dye therein, will induce fluorescence when exposed to illumination with the excitation wavelength.

Please replace paragraph [0031] with the following amended paragraph:

[0031] An exemplary system for detecting remaining photoresist [[46]] 51 on a mask blank 32 after development, to detect the presence of a defect therein, is

illustrated schematically in Fig. 9. Light 52, containing the excitation wavelength of the fluorescent dye in the photoresist [[46]] 51, if any, remaining on the mask blank 32, is directed toward the surface of the mask blank 32 from a conventional illumination source 54. The illuminating light 52 provided from the illumination

5 source 54 excites the fluorescent dye material in the remaining photoresist material [[46]] 51, inducing fluorescence 56. An optical microscope 60, such as, for example, a confocal microscope, is positioned to examine the illuminated surface of the mask blank 32. Any fluorescent area on the surface of the mask blank 32 is easily detected using such a microscope 60, thereby to detect the presence of a defect in the mask

10 blank 32.